value of securities owned, the income from which is includable in this account. Amounts thus credited or charged shall be concurrently included in the accounts in which the securities are carried. This accounts shall not include interest or other returns on securities issued or assumed by the company and held by or for it, whether pledged as collateral, or held in its treasury, in special deposits, or in sinking or other funds. Cash discounts on bills for material purchased also shall not be included in this account.

(d) This account shall include the income accrued on cash, securities issued by other companies, and other assets (not including securities issued or assumed by the company) held in sinking and other funds. There shall be included in this account for each month the applicable amount requisite to extinguish, during the interval between the date of acquisition and the date of maturity, the difference between the purchase price, and the par value of securities held in sinking or other funds. Amounts thus credited or charged shall be concurrently included in the accounts in which the securities are carried.

(e) This account shall be credited with such amounts as are charged to the cable services plant accounts for the purpose of recording an allowance for funds used for construction purposes.

(f) This account shall include gains or losses resulting from the disposition of gains or losses from the disposition of land or artworks; disposition of plant with traffic; and disposition of nonoperating cable services plant not previously used in the provision of cable services.

(g) This account shall include all other items of income and gains or losses, including:

(1) Fees collected in connection with the exchange of coupon bonds for registered bonds;

(2) Gains or losses realized on the sale of temporary cash investments or marketable equity securities;

(3) Uncollectible amounts previously credited to Accounts 7310 through 7350, inclusive;

(4) Net unrealized losses on investments in current marketable equity securities;

(5) Write-downs or write-offs of the book costs of investment in equity securities due to permanent impairment;

(6) Gains or losses of nonoperating nature arising from foreign currency exchange or translation;

(7) Gains or losses from the extinguishment of debt made to satisfy sinking fund requirements;

(8) Amortization of Goodwill;

(9) Company's share of the earnings or losses of affiliated companies accounted for on the equity method; and

(10) The net balance of the revenue from and the expenses (including depreciation, amortization and insurance) of property, plant, and equipment, the cost of which is includable in the Nonoperating Plant account.

(h) This account shall include the following costs, which are presumed to be excluded from the cost of service in setting rates:

(1) Lobbying includes expenditures for the purpose of influencing public opinion with respect to the election or appointment of public

officials, referenda, legislation, or ordinances (either with respect to the possible adoption of new referenda, legislation or ordinances, or repeal or modification of existing referenda, legislation or ordinances) or approval, modification, or revocation of franchises, or for the purpose of influencing the decisions of public officials. This also includes advertising, gifts, honoraria, and political contributions. This does not include such expenditures which are directly related to communications with and appearances before regulatory or other governmental bodies in connection with the reporting utility's existing or proposes operations;

(2) Contributions for charitable, social or community welfare purposes;

(3) Membership fees and dues in social, service and recreational or athletic clubs and organizations;

(4) Penalties and fines paid on account of violations of statutes. This account shall also include penalties and fines paid on account of violations of U.S. statutes including judgments arising from a violation of antitrust laws; and

(5) Abandoned construction projects.

§ 76.1237 Nonoperating taxes.

(a) The Nonoperating Tax accounts shall include taxes arising from activities which are not a part of the central operations of the entity.

(b) This account shall be charged and the Unamortized Nonoperating Investment Tax Credits--Net account, shall be credited with investment tax credits generated from qualified expenditures related to other operations which the company has elected to defer rather than recognize currently in income.

(c) This account shall be credited and the Unamortized Nonoperating Investment Tax Credits - Net account shall be charged with the amortization of each year's investment tax credits included in such accounts relating to amortization of previously deferred investment tax credits of other property or regulated property, the amortization of which does not serve to reduce costs of service (but the unamortized balance does reduce rate base) for ratemaking purposes. Such amortization shall be determined with reference to the period of time used for computing book depreciation on the property with respect to which the tax credits relate.

(d) This account shall be charged and the Income Taxes--Accrued account shall be credited for the amount of nonoperating Federal income taxes for the current period. This account shall also reflect subsequent adjustments to amounts previously charged. Taxes shall be accrued each month on an estimated basis and adjustments made as later data becomes available. Companies that adopt the flow-through method of accounting for investment tax credits shall reduce the calculated provision in this account by the entire amount of the credit realized during the year. Tax credits, other than investment tax credits, if normalized, shall be recorded consistent with the accounting for investment tax credits. No entries shall be made to this account to reflect interperiod tax allocation.

(e) This account shall be charged and the Income Taxes--Accrued account should be credited for the amount of state and local income taxes for the current period. This account shall also reflect subsequent adjustments to amounts previously charged. Taxes shall be accrued each month on an estimated basis and adjustments made as later data becomes available. No entries shall be made to this account to reflect interperiod tax allocation.

(f) This account shall be charged and the Other Taxes--Accrued account shall be credited for all nonoperating taxes, other than Federal, state and local income taxes, and payroll related taxes for the current period. Among

the items includable in this account are property, gross receipts, franchise and capital stock taxes. This account shall also reflect subsequent adjustments to amounts previously charged.

§ 76.1238 Interest and related items.

(a) This account shall include the current accruals of interest on all classes of debt the principal of which is includable in the Funded Debt account. It shall also include the interest on funded debt the maturity of which has been extended by specific agreement. It shall not include charges for interest on funded debt issued or assumed by the company and held by or for it, whether pledged as collateral or held in its treasury, in special deposits or in sinking or other funds. Interest expressly provided for and included in the face amount of securities issued shall be charged at the time of issuance to the Other Prepayments accounts and cleared to this account as the term expires to which the interest applies. This account shall also include monthly amortization of balances in the Premium on Long-Term Debt account and the Discount on Long-Term Debt account.

(b) This account shall include the interest portion of each capital lease payment.

(c) This account shall include the monthly amortization of the balances in the Unamortized Debt Issuance Expense account.

(d) This account shall include all interest deductions not provided for elsewhere, including:

(1) Advances from affiliated companies;

(2) Advances from nonaffiliated companies and other liabilities

(3) Assessments for public improvements past due;

(4) Bond coupons, matured and unpaid;

(5) Claims and judgments;

(6) Customers' deposits;

(7) Funded debt mature, with respect to which a definite agreement as to extension has not been made;

(8) Notes payable on demand or maturing one year or less from date of issue;

(9) Open accounts;

(10) Tax assessments, past due; and

(11) Discount, premium, and issuance expense of notes maturing one year or less from date of issue.

§ 76.1239 Extraordinary items.

(a) This accounts is intended to segregate the effects of events or transactions that are extraordinary. Extraordinary events and transactions are distinguished by both their unusual nature and by the infrequency of their occurrence, taking into account the environment in which the company operates. This accounts shall also include the related income tax effect of the extraordinary items.

(b) This account shall be credited with nontypical, noncustomary and infrequently recurring gains which would significantly distort the current

year's income computed before such extraordinary items, if reported other than as extraordinary items.

(c) This account shall be debited with nontypical, noncustomary and infrequently recurring losses which would significantly distort the current year's income computed before such extraordinary items, if reported other than as extraordinary items.

(d) This account shall be charged or credited and the Income Taxes--Accrued account shall be credited or charged for all current income tax effects (Federal, state and local) of items included in subsection (b) and (c) of this section

(e) This account shall be charged or credited, as appropriate, with a contra amount recorded to the Net Noncurrent Deferred Nonoperating Income Taxes account or the Net Current Deferred Nonoperating Income Taxes account for the income tax effects (Federal, state and local) of items included in subsection (b) and (c) of this section that have been deferred.

§ 76.1240 Nonregulated net income.

(a) This account shall be used by those companies who offer nonregulated activities that do not involve the joint or common use of assets or resources used in the provision of both regulated and nonregulated products and services, and which have not established a separate subsidiary for that purpose.

(b) All revenue and expenses (including taxes) incurred in these nonregulated activities shall be recorded on separate books of account for such operations.

§ 76.1241 Glossary of terms.

When used in this system of accounts:

"Account" means a specific element of a chart of accounts used to record, classify and accumulate similar financial transactions resulting from the operations of the entity. "Accounts" or "these accounts" refer to the accounts of this system of accounts.

"Accounting System" means the total set of interrelated principles, rules, requirements, definitions, accounts, records, procedures and mechanisms necessary to operate and evaluate the entity from a financial perspective. An accounting system generally consists of a chart of accounts, various parallel subsystems and subsidiary records. An accounting system is utilized to provide the necessary financial information to users to meet judiciary and other responsibilities.

"Affiliated companies" means companies that directly or indirectly through one or more intermediaries, control or are controlled by, or are under common control with, the accounting company. See also Control.

"Amortization" means the systematic recoveries, through ratable charges to expense, of the cost of assets.

"Associated equipment" means that equipment which functions with a specific type of plant or with two (2) or more types of plant, e.g., switching equipment, network power equipment, circuit equipment, common channel network signaling equipment or network operations equipment. Associated equipment shall be classified to the account appropriate for the type of equipment with which it is predominately used rather than on its own characteristics.

"Book cost" means the amount at which property is recorded in these accounts, without deduction of related allowances.

"Company" or **"the company"** when not otherwise indicated in the context, means the accounting entity.

"Control" (including the terms **"controlling," "controlled by,"** and **"under common control with"**) means the possession directly or indirectly, of the power to direct or cause the direction of the management and policies of a company, whether such power is exercised through one or more intermediary companies, or alone, or in conjunction with, or pursuant to an agreement with, one or more other companies, and whether such power is established through a majority or minority ownership voting of securities, common directors, officers, or stockholders, voting trusts, holding trusts affiliated companies, contract, or any other direct or indirect means.

"Cost," except as applied to cable services plants, franchises, and patent rights, means the amount of money actually paid (or the current moneyvalue of any consideration other than money exchanged) for property or services. See also Original Cost.

"Cost of removal" means the cost of demolishing, dismantling, removing, tearing down, of otherwise disposing of cable services plant and recovering the salvage, including the cost of transportation and handling incident thereto.

"Depreciation" means the loss not restored by current maintenance, incurred in connection with the consumption or prospective retirement of cable services plant in the course of service from causes which are known to be in current operation, against which the company is not protected by insurance, and the effect of which can be forecast with a reasonable approach to accuracy. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in technology, changes in demand and requirements of public authorities.

"Intangible property" means assets that have no physical existence but instead have value because of the rights which ownership confers.

"Minor items," as applied to depreciable cable services plant, means any part or element of such plant, which when removed, (with or without replacement) does not initiate retirement accounting.

"Original cost" or **"cost,"** as applied to cable services plant, rights of way and other intangible property, means the actual money cost of (or the current money value of any consideration other than money exchanged for) property at the time when it was first dedicated to use by a cable operator, whether the accounting company or by predecessors.

For the application of this definition to property acquired from predecessors see § 76.1600(b)(1). Note also the definition of Cost in this section.

"Plant retired" means plant which has been removed, sold, abandoned, destroyed, or otherwise withdrawn from service.

"Retirement units," as applied to depreciable cable services plant, means those items of plant which when removed (with or without replacement) cause the initiation of retirement accounting entries.

"Salvage value" means the amount received for property retired, if sold, or if retained for reuse, the amount at which the material recovered is chargeable to the Material and Supplies account or other appropriate account.

"Subsidiary record" means accumulation of detailed information which is required by this Commission to be maintained in support of entries to the accounts.

"Subsidiary record categories" means those segregations of certain regulated costs, expenses and revenues which must be maintained and are subject to specific reporting requirements of this Commission.

"Subsystems, parallel mechanisms" means processes or procedures which augment the use of a chart of accounts in the financial operation of the entity. These subsystems operate on and/or process account and subsidiary record information for specific purposes.

"Time of installation" means the date at which cable services plant is placed in service.

"Time of retirement" means the date at which cable services plant is retired from service.

"Tangible property" means assets characterized by physical existence, such as land, buildings, equipment, furniture, fixtures and tools.

Attachment D

Cost of Equity Analysis

1. Commenters submit studies by four experts.[1] CATA presents a capital asset pricing model (CAPM) study analyzing cable surrogates and cable companies prepared by Peter K. Pitsch (Pitsch). Cablevision Industries also submits a CAPM study prepared by the Brattle Group (Brattle). Bell Atlantic submits a discounted cash flow (DCF) analysis of the S&P 400 as a cable surrogate prepared by James H. Vander Weide (Vander Weide). Comcast and COA submit a comparable earnings study prepared by AUS Consultants (AUS).

A. Cost of Equity Approaches

2. Risk premium analysis. Risk premium analyses estimate the cost of equity by adding a risk premium to the yield on alternative relatively risk-free investments such as bonds. The risk premium is usually based on a comparison of historic realized returns on stocks and bonds. The current yield on a bond provides an easily determined reference point for current investor expectations on inflation and the general state of the economy.

3. The parties submitting risk premium analyses relied upon the CAPM variant of this methodology. CAPM uses a general risk premium, based on the differences in return on a risk-free investment and a diversified portfolio of risk-bearing investments, and adjusts it for the target stock's variance in return relative to that of a diversified portfolio.[2] This adjustment is performed through the following formula:

COE = RF + (beta * RP), where

COE is the cost of equity estimate,

RF is the current yield on risk-free investment,

RP is the risk premium that compensates for the difference in the risk of a diversified, risk-bearing portfolio and a risk-free investment, and

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[1] These submissions were made in August 1993 and appear to be based on 1992 and early 1993 data.

[2] CAPM practitioners generally assume United States Treasury bills provide a certain (i.e., risk-free) return. The stockmarket overall is used as a proxy for all possible risk-bearing investments, based on the view that it offers investments in almost every conceivable line of business.

beta is a measure of a stock's unavoidable variance in return (i.e., non-diversifiable risk).

4. The CAPM beta is based on the widely accepted tenet of finance theory that investors require compensation only for risk (that is, variance in return) that cannot be avoided by holding a diversified investment portfolio. This risk (beta) is often estimated by comparing past variations in the return on the stock and on the stockmarket overall. A CAPM analysis of a portfolio containing all possible investments would produce a beta of one. The S&P 400 is generally assumed to have a beta of one.

5. In a previous proceeding we recognized CAPM's potential as a methodology for estimating the cost of capital.[3] However, we found problems in that proceeding -- unrealistic risk premiums and betas -- that precluded our acceptance of CAPM analyses at that time.[4]

6. DCF Analysis. The Commission has relied upon the DCF method extensively in the past. This was the underlying method proposed in the Notice. The DCF methodology employs dividend and stock price data to estimate the return on equity needed to satisfy investor risk expectations. It does so based on the following equation:

$$Ke = D/P + G, \text{ where}$$

Ke = the DCF estimate of the cost of equity,

D = the expected annual common stock dividend,

P = the current price of a share of common stock, and

G = the estimated long-term growth rate of earnings.

7. D/P, or the current yield, is estimated by dividing the projected dividend for the next year by the current common stock price. Long-term growth is based on analysis of published estimates of growth such as are available to investors. In the Notice, we cautioned that applying the DCF method to companies with no current dividends requires careful attention from the

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[3] Represcribing the Authorized Rate of Return for Interstate Services of Local Exchange Carriers, 5 FCC Rcd 7507, 7523-24, ¶¶ 133-39 (1990) (1990 Telco Represcription Order), recon. denied 6 FCC Rcd 7193 (1993), aff'd sub nom. Illinois Bell Tel. Co. v. FCC, 988 F.2d 1254 (D.C. Cir. 1993) (Illinois Bell).

[4] 1990 Telco Represcription Order, 5 FCC Rcd at 7524, ¶ 139.

analyst to ensure a creditable estimate.[5] In practice, most S&P 400 companies provide investors with a mixture of dividends and capital gains (reflecting reinvested earnings).

8. Comparable Earnings Analysis. The comparable earnings method looks at the ratio of reported earnings to the book value of equity for a group of comparable companies. This method assumes either that the earnings of comparable companies equals the regulated company's cost of capital, or, alternatively, that fairness would allow regulated and nonregulated companies the same risk-adjusted rate of return. The main criticisms of this method are that there is no way to determine whether the comparable companies' earned returns are higher or lower than the regulated company's cost of capital, and that an accounting measure of return is generally not the same as the return realized by stockholders. By contrast, the previous two methods are more market-oriented and take into account both earnings and capital gains.[6]

B. Cost of Equity Studies

1. Summaries

9. Pitsch (CATA). CATA's consultant, Pitsch, offers three analyses. The first provides CAPM estimates of the cost of equity for two cable companies, four companies with mixed cable and other operations, and the seven Regional Bell Holding Companies (RHCs).[7] Using Value Line[8] betas, risk premiums of 6.9% and 7.5%, and a risk-free rate of 5.8%, the estimates are 15.8% to 18.2% for the two cable companies, 12.4% to 17.8% for the mixed cable companies, and 11.3% to 12.6% for the telephone companies. Pitsch concludes that this analysis supports a cost

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[5] Notice, at n.54.

[6] See Methods Used to Estimate the Cost of Equity Capital in Public Utility Rate Cases: A Guide to Theory and Practice, prepared for the California Public Utility Commission, Charles River Associates, CRA Report 607 (March 1982).

[7] CATA Comments, Peter K. Pitsch, Implementation and Analysis of Cost-of-service Regulation for the Cable Service Industry at 15 (Pitsch Report). Pitsch analyzed the Class A common stock of two cable companies, Cablevision Systems and TCI. His group of four mixed-operation companies were Comcast, Knight Ridder, Times Mirror, and Time Warner.

[8] Value Line is an investor information publication that periodically issues financial and stock market statistics for popular stocks.

of equity for cable companies of between 16% and 18%.[9]

10. The second Pitsch analysis adds a 6% "risk premium" to the May 1993 yields on bonds of seven cable operators, seven companies with mixed cable and other operations, and the seven RHCs. The three distinct bond yields reported for the cable and mixed cable companies produce equity estimates of 14.1%, 14.8% and 16.6%. Estimates for the RHCs are 13.6%, 14.1%, and 14.2%. Pitsch concludes that this analysis supports an equity range of 15% to 17%.[10]

11. The third Pitsch analysis applies CAPM to the S&P 400 (assumed beta of 1.0), to a hypothetical stock with a beta of 1.5, and to TCI's stock with a 1993 beta of 1.65. Pitsch calculates a risk premium of 5%, which reflects the risk differential between the lowest two quartiles of S&P 400 DCF cost of equity estimates and "Aa" rated utility bond yields, plus a 1.7% risk differential between bonds and U.S. Treasury bills.[11] Using betas of 1.0, 1.5 and 1.65, and a risk-free rate of 5.8%, Pitsch reports cost of equity estimates of 12.5%, 16%, and 17%, respectively.

12. Pitsch concludes that his analyses produce estimates of the cost of equity of 18%, 16%, and 17%. He recommends that the cost of equity be set at 18%.[12]

13. Brattle (Cablevision Industries). Brattle estimates a cable risk premium add-on to any S&P 400 overall cost of capital estimate. Brattle calculates betas for eleven stocks issued by seven cable operators.[13] The betas range from 0.84 to 2.41. The average beta for 1993 is 1.74. Brattle adopts a CAPM risk premium of 8.2%, stating that this number is supported by considerable evidence. Most of Brattle's analysis attempts to adjust for the capital structure differences between S&P 400 and cable companies. Brattle assumes a "debt beta" of 0.25 for the

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[9] Id. at 17.

[10] Id. at 18.

[11] Id. at 21. As the source for the 5% risk premium Pitsch cites the Notice at ¶ 52.

[12] CATA Comments, Pitsch Report at 21.

[13] Cablevision Industries Comments, A. Lawrence Kolbe and Lynda S. Borucki, Rate of Return Issues in Cable Television Cost-of-Service Regulation, (Brattle Return) at 15 & Table 2. The cable companies analyzed are: Adelphia, Cablevision Systems, Century, Comcast (Class A and Special stock), Jones (three stock issues), TCA, and TCI (Class A and B stock).

S&P 400 and 0.5 for the cable industry, based on a calculation that divides yield differences between various grades of long-term bonds and short-term United States Treasury bills by the 8.2%.[14]

14. Brattle attempts to create "unlevered betas" by averaging cable stock betas and the cable "debt beta," weighted by the market value of cable equity and the book value of cable debt. Brattle then "relevers" by averaging the "unlevered betas" and the S&P 400 "debt beta," weighted by an assumed 50% debt/50% capital structure for the S&P 400. Brattle's incremental risk premium is the difference between the average relevered cable beta (1.55) and the average S&P 400 beta (1.0), multiplied by its assumed risk premium, and adjusted by the assumed S&P 400 debt/equity ratio.[15] Brattle does not provide an estimate of the cost of equity.

15. Vander Weide (Bell Atlantic). James H. Vander Weide rejects estimating the cost of capital from cable industry data, maintaining that most cable companies are either closely held, widely diversified, or pay no dividends. To identify a surrogate group with overall risks similar to cable, he considers separately the business and financial risks of cable. He quotes Creditweek:

> Industry risk remains low, relative to the average industrial company, due to the stability of service demand, continuing subscriber growth, and the predictability of cash-flow generation. Through the recession and slow recovery, a period of low consumer confidence, demand for cable TV service has increased.[16]

Vander Weide argues that cable has very low business risk due to its "stability of service demand" resulting from most communities granting a franchise to one company; "continuing subscriber growth" resulting from innovations in cable capacity; and "predictability of cash flow generation" resulting from high market penetration, recession resistance, and low post-construction maintenance costs. Looking at business risk alone, he maintains that cable would be less risky than local telephone companies because cable still faces no multichannel competitor in

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[14] Cablevision Industries Comments, Brattle Return at 20, B-3.

[15] Id. at 19, Table 4 following p.19, B-3, B-6.

[16] Bell Atlantic Comments, Vander Weide Affidavit at 11, quoting Standard & Poor's Creditweek, at 51 (Apr. 5, 1993).

its local markets.[17]

16. Turning to the financial risk, Vander Weide states that this low business risk is partially offset by cable's reliance on debt financing. He quotes from Creditweek:

> Easy availability of debt financing through bank borrowings and high-yield debt markets enabled cable operators to acquire smaller players in a market characterized by rising cable system prices and cash flow multiples. Rising asset values and the liquidity of this market gave lenders confidence that, should borrowers experience financial difficulties, a few properties could be sold at a premium to pay down debt.[18]

He notes that the combination of easy debt financing and start-up losses have left many cable operators with negative net worth on their books (i.e., with capital structures showing debt exceeding total assets).

17. Based on the cable industry's current high financial risk, Vander Weide recommends that the third quartile of the S&P 400 be used as the surrogate for the cable industry's cost of equity capital.[19] He maintains that the third quartile S&P 400 companies have significantly more business risk than the average cable operator, but that the S&P companies also finance their operations with significantly more equity. Based on business risk alone, however, he would recommend the first quartile of the S&P 400 as the equity return surrogate for cable.

18. Vander Weide estimates the current cost of equity capital for the companies composing the S&P 400 using the DCF method the Commission has applied to the telephone industry. The lowest quartile of the S&P 400, ranked by estimate, has an

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[17] Vander Weide Affidavit at 8, 11-14, & Appendix 2.

[18] Id. at 12, quoting Standard and Poor's Creditweek, at 6 (Feb. 24, 1992).

[19] Vander Weide followed the methodology we employed in the 1990 Telco Represcription Order, 5 FCC Rcd at 7513, ¶¶ 57-60. In that proceeding, the S&P 400 companies for which sufficient data were available to make DCF calculations were viewed as a large group of publicly-traded companies that was roughly representative of the universe of nonregulated companies. By ranking the companies in order of their DCF cost of equity estimates, and grouping them into quartiles (the first quartile being the lowest) the Commission obtained a sense of the investor-required returns for a wide range of firms.

average cost of equity of 11.80%; the third quartile has an average cost of equity of 15.11%. For the S&P 400 overall, the average cost of equity is 14.58%.

19. In its reply, Comcast attempts to rebut Vander Weide through an analysis prepared by George R. Schink.. Schink contends that Vander Weide is incorrect in asserting that cable is less risky than telephone and that cable and telephone are converging. Schink argues that comparisons of size, financial leverage, profits, financial ratios, and stock betas show less risks for the RHCs than for the three assertedly "pure play" cable operators (Cablevision Systems, Comcast, and TCI). Schink asserts that two small independent telephone companies earned higher returns than the RHCs and, thus, that smaller companies have higher costs of equity capital. Schink further contends that smaller telephone operating units earned higher returns in 1991, that cable franchises are smaller than telephone operating companies, and, thus, that cable has a higher cost of capital than telephone. He asserts that the average cable system has 5,026 subscribers, and that the smallest telephone operating unit for which he had data had 7,940 access lines and a return on equity of 20.2% in 1991.[20]

20. AUS (Comcast and COA). AUS prepared a study that was submitted by Comcast and COA with their comments in this proceeding. AUS proposes four groups of firms it believes are comparable to cable, and estimates the cost of capital based on historic and future earnings.[21]

21. The first group consists of seventy S&P industrial companies selected from within the S&P 400 using two criteria that AUS derived from Value Line data on five cable companies for which it publishes data. The first criterion screens out companies having betas more than three standard deviations from the 1.41 average of the five cable betas (0.98 - 1.84). The second criterion screens out companies that do not have the large avoidable risks of the cable companies over the past five years.[22]

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[20] Comcast Reply, Schink Affidavit at 3, 7-18, & Appendices 2-9.

[21] Comcast Comments, AUS Consultants at 7. COA files AUS's full U.S. Cable Television Industry White Paper, of which the rate of return study filed by Comcast is a part, as an attachment to its comments. All page references herein are to the Comcast attachment; the parallel text in the COA attachment begins at page 59.

[22] Comcast Comments, AUS Consultants at 15.

22. AUS's remaining three comparable groups consist of firms that AUS asserts compete with cable. AUS's telecommunications group includes the seven RHCs and the five largest independent telephone companies. AUS's broadcast group includes all five Value Line broadcasting companies. AUS's preferred recreation group includes all Value Line movie, local leisure, and vacation/resort service companies.[23]

23. AUS estimates the cost of equity using the Value Line 5-year historic returns on net worth and the Value Line 3-year projected returns. These returns range from 12.5% to 21.1%. AUS subdivides each of its groups into preferred and alternative groups. For AUS's preferred groups, historic and forecast returns average 14.6% and 17.4%, respectively. Based on a table referenced by AUS, the recommended equity return appears to be centered on 16%, with upper and lower bounds of 17.3% and 14.7%.[24]

2. Analysis

24. CAPM Estimates. Brattle, Pitsch, and Economist, Inc. all rely heavily on CAPM and estimates of beta for a small number of cable companies: Adelphia, Cablevision Systems, Century, Comcast, Jones, TCA, and TCI.[25] These analysts all implicitly assume that these betas represent an accurate indicator of the risks associated with the provision of regulated cable service. Based on the record before us, we do not find this implicit assumption to be valid.

25. CAPM assumes a competitive market in which no single investor can affect the price of a stock through his or her buying or selling.[26] It is not clear that any of the analyzed cable stock issues meet that assumption:

> Adelphia's Class A stock (carries 1 vote and the right to elect 1 director) has 74 holders of record, including officers and key employees. Adelphia's Class B stock (10 votes and the right to elect remaining directors) is held by 7 people, primarily by Rigas family members. Brattle

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[23] Id. at 16-17.

[24] Id. at 7, 18, & Exhibit 6 at 3.

[25] Although Time Warner is a major cable operator, cable provided only $2 billion of its $13 billion in revenues for 1992. See Time Warner Annual Report for 1992, at 61.

[26] Edwin J. Elton and Martin J. Gruber, Modern Portfolio Theory and Investment Analysis, 275 (Wiley 1981).

reports Adelphia's stock beta was 1.98 in 1993.[27]

Cablevision is controlled by a single shareholder, and insiders own 19% of Class A and 55% of Class B shares.[28] Brattle reports a beta of 1.86.

Comcast insiders own 20% and control 80% of its stock.[29] Brattle reports Comcast's Class A common stock beta has risen from approximately 1 between 1987 and 1989 to 1.56 in 1993.

Glenn R. Jones owns 89% of Jones Spacelink has its Class A and 100% of its Class B stock owned by .[30] Jones Intercable has 58% of the common stock owned by Glenn R. Jones. Brattle reports 1993 betas of 1.48 for Jones Intercable, 1.93 for Jones Intercable Class A, and 2.41 for Jones Spacelink.

TCI insiders control 8.55% of Class A and 68.3% of Class B (carries right to 10 votes) stock.[31] Brattle reports TCI's Class B stock beta rose from 1.05 in 1987 to 1.35, and that the Class A beta rose from 1.35 to 1.74 in the same period.[32]

26. The Value Line reports cited above also list a constant stream of insider decisions to buy, sell, or exercise options. Insider decisions regarding closely-held stock introduce speculative risks for other investors that magnify the underlying business and financial risks of the companies. We believe that betas incorporating these insider decisions overstate the risks of supplying equity capital for regulated cable service.

27. The CAPM presentations all rely on the stock performance of the cable companies over the last five years to estimate beta. The history of the cable industry over the last five years is replete with unique events, not the least of which was the ultimate passage of legislation regulating the industry.

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[27] SEC Form 10K, Adelphia, 1993 fiscal year, at 27; Cablevision Industries, Brattle Return, Table 2.

[28] Value Line, CableVision 'A' (Dec. 24, 1993).

[29] Value Line, Comcast Corp (June 25, 1993).

[30] SEC Form S-3, Jones Intercable, at 7 (June 4, 1992).

[31] Value Line, Tele-Com. 'A' (Dec. 24, 1993).

[32] We were unable to obtain information about Century and TCA.

By relying on historic betas, these analysts have chosen data that incorporate speculative risks that bear no relationship to the future risks of regulated cable service. Further, we believe that most volatile component investor risk and return expectations for cable services has been the exercise of monopoly market power. Thus, even if the historic beta could be adjusted to provide an accurate estimator of cable, it would still require an additional, downward adjustment for the monopoly profit component of investor expectations. It seems improbable that investor expectations of the risks associated with cable company stocks are accurately portrayed by the mechanical application of the beta formula. In these circumstances, we must conclude that the Brattle and Pitsch analyses fail to measure accurately the cost of equity for regulated cable service.[33] While it is conceivable that those analyses could be reformed to make CAPM a useful tool for determining that cost of equity, the parties have not attempted to analyze what a forward-looking beta might be, nor have they provided the information that would allow us to perform our own analysis.

28. DCF Estimates. This Commission and other agencies have relied upon DCF analyses on numerous occasions to estimate the cost of equity.[34] Most recently, in the 1990 Telco Represcription Order, we used DCF cost of equity estimates for the S&P 400 as a benchmark in establishing a reasonable zone for the cost of equity for LEC interstate access service. We examined criticisms of that method presented by parties that urged higher costs of equity than that indicated by the DCF method. We applied that method to the RHCs, a large group of public utilities, and to the S&P 400.[35] Although we gave the greatest weight to the DCF cost of equity estimates for the RHCs, we gave significant weight to DCF cost of equity estimates for the S&P 400 as a source of benchmarks to determine investor required returns.[36] Vander Weide also relies on DCF cost of

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[33] Economist, Inc., which estimates betas of 1.03 to 1.53 for unspecified stock issues for six cable companies, also fails to recognize that historic betas do not accurately portray the underlying future risks of regulated cable service.

[34] See, e.g., 1990 Telco Represcription Order, 5 FCC Rcd at 7530-31, ¶¶ 174-88; Authorized Rates of Return for the Interstate Services of AT&T Communications and Exchange Telephone Carriers, Report and Order, CC Docket No. 84-800, Phase III, 51 Fed. Reg. 32920, ¶¶ 45-46 (1986)(1986 Represcription Proceeding), recon. denied, 2 FCC Rcd 5636 (1987).

[35] 1990 Telco Represcription Order, 5 FCC Rcd at 7514-15, ¶¶ 54-75.

[36] Id. at 7530-31, ¶¶ 174-188.

equity estimates for the S&P 400.

29. The D.C. Circuit affirmed the 1990 Telco Represcription Order on review. The Court determined that we had acted reasonably in relying on the DCF method.[37] The Court also noted that "[f]inding unregulated companies of comparable risk is an extremely tricky process"[38] and implicitly approved our reliance on DCF cost of equity estimates for the S&P 400.[39]

30. Comparable Group Estimates. AUS's first analysis of proposed comparable firms is its group of seventy industrial companies screened from the S&P 400 using two CAPM concepts, unavoidable risk (as measured by beta) and avoidable risk. The beta screen covers a broad range (0.98 to 1.84) and mainly excludes below-average risk companies. This screen is consistent with the CAPM tenet that unavoidable risk is a key risk factor for investors. AUS used this screen to reflect the historically high betas of a small group of cable stocks. As we have stated, these betas overstate the risks of supplying equity capital for regulated cable service.[40]

31. The avoidable risk screen requires that companies have avoidable risk similar to that of cable companies. AUS used this screen despite CAPM's rejection of avoidable risk as a factor in investor risk calculations since it is readily eliminated by portfolio diversification.[41] AUS offers no rationale for using this screen. Because we perceive no basis for assuming that this screen is a valid method of selecting comparable firms, we decline to rely on this AUS analysis.

32. Further, a key test of a comparable group analysis is whether the selected companies appear to form a roughly homogeneous group with characteristics generally comparable to the target service.[42] The AUS industrial group contains many companies that are neither obviously parallel to cable service nor seemingly similar to each other -- e.g., Avon, Bethlehem Steel, Mattel, and Intel. This lack of comparability confirms the inadequacy of AUS's screens.

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[37] Illinois Bell Tel. Co. v. FCC, 988 F.2d at 1259-64.

[38] Id. at 1262.

[39] See id. at 1262-64.

[40] See ¶ 26, supra.

[41] Comcast Comments, AUS Consultants at 13, 14-15.

[42] See 1990 Represcription Order, 5 FCC Rcd at 7526, para. 161.

33. AUS's remaining three groups consist of companies that assertedly compete with cable. AUS provides no basis for believing that investors see these companies as having the same risks as cable. AUS's preferred recreation group does not seem to be comparable to a regulated monopoly providing cable service.[43] This group includes movie producers (Paramount and Disney), vacation resort operators (Club Med and Carnival Cruise), and a video game producer (Electronic Arts). It also includes companies with unusually high historic and projected returns. (Cedar Fair has 60% historic and projected annual returns; Avon has 55% and 46% historic and projected returns; and King World, which appears in this group and in the industrial group, had a one-year return exceeding 117%.)[44] We find no basis for concluding that these groups' earnings approximate the cost of equity for regulated cable service, or that fairness requires that we allow regulated cable service returns of this magnitude.

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[43] Id. at Exhibit 5, p.8.

[44] AUS asserts that its telecommunications group currently competes with cable, but its discussion emphasizes the non-comparability of telephone and cable. Id. at 15. For all comparable groups, AUS calculates the historic return on net worth leaving out negative values. Thus, for example, AUS reports Cumins Engine's equity return as 13.4%, when the actual average (including negative returns) is -2.8%. AUS does not comment on this procedure. Comcast Comments, AUS Consultants, Exhibit 2, p.2; Exhibit 4, p.2; Exhibit 5, p.8. Missing values for Cumins Engine were calculated from Value Line (Nov. 12, 1993) report by dividing net profit by net worth. We find AUS's procedure introduces an upward bias in its estimates of the cost of equity capital.

February 22, 1994

SEPARATE STATEMENT

OF

COMMISSIONER ANDREW C. BARRETT

RE: Implementation of the Cable Television Consumer Protection and Competition Act of 1992 -- Rate Regulation (Fourth Order on Reconsideration, Fourth Report and Order)

With today's actions, the Commission revises its cable rate regulations by modifying the benchmark methodology, which serves as the primary approach for regulating cable service rates. In a separate rulemaking, the Commission establishes requirements to govern cost-of-service showings to justify rates above the levels determined by the benchmark approach.

The Commission's decision affirms a benchmark methodology and establishes a new competitive differential at 17% relative to September 1992 rate levels to guide rate reductions. Accordingly, the revised rules will require systems to reduce rates by 17% from their September 1992 level, or to the new benchmark, whichever is less. Once systems make their necessary reductions to comply with the new benchmark mechanism, they are permitted to add external costs and to apply a "going forward" adjustments for additional channels or system upgrades. Systems that have reduced rates by 17% (i.e., a prior 10% adjustment under the old benchmark and an additional 7% under the new benchmark), also may make adjustments for inflation.

In addition, these revised rules will initiate cost studies to verify cost differences among cable operators in comparison to the competitive differential. Systems that are required to reduce their rate by an amount less than the full 17% competitive differential -- as well as systems with rates below the new benchmark level that are not required to make any immediate reductions -- will be required to engage in future rate actions in accord with the results of the cost studies. As further elements of the cable rate regulation package, the Commission establishes (1) a mechanism to allow "going forward" adjustments for additional channels and system upgrades, and (2) a standard for targeted rate relief, as well as provisions for administrative relief, to small operators.

During this proceeding, I have consistently stated that the Commission must implement rate regulations in an orderly and effective manner in order to maintain the integrity of our regulatory process, to avoid creating potential unintended consequences, and to minimize false expectations among the consumer public.[1] I have also stated that the Commission's rate

[1] See Order in MM Docket No. 92-266, FCC 93-372, released July 27, 1993, 58 FR 41042 (Concurring in Part and Dissenting in Part Statement of Commissioner Andrew C. Barrett). See also First Order on Reconsideration in MM Docket No. 92-266, FCC 93-248, released August 27, 1993, 58 FR 46718 (Separate

regulation mechanisms must (1) incorporate measures of flexibility in order to balance the concerns of the industry, consumers, and franchising authorities, and (2) minimize the uncertainty that has resulted from the cable rate regulation proceeding so that consumers and the industry may develop realistic expectations and business plans, respectively.[2]

I write separately today in order to emphasize that my decision to support this rate regulation package is based on the measure of flexibility built into a benchmark system of regulation, including several of the "going forward" and "cost-of-service" components. Given the lack of complete information on pricing and costs, and our relatively limited sample for competitive and noncompetitive pricing behavior, I believe that a revised benchmark approach exercises the necessary caution in recognizing the variety of cost structures and pricing practices throughout the cable industry. During the reconsideration process, the Commission has revised the benchmarks by correcting the data on competitive and noncompetitive systems as well as refining the statistical procedure for estimating the benchmarks. Therefore, I believe that the benchmark information, although arguably subject to certain shortcomings detailed in this proceeding's record, now forms a better foundation for other components of the rate regulation package, especially the "going forward" allowances for channel additions and upgrades.

Next, I believe that the other components in this rate regulation package -- including the "going forward" methodology, the presumptions established to guide decisions regarding "a la carte" practices, and the provisions for a measure of small system relief -- will provide necessary flexibility to allow operators to begin to develop future business plans and to add new programming services. With respect to the "going forward" mechanism, I believe that the allowance for actual programming costs may help to avoid unintended consequences for program services as a result of the revised rate regulations. The opportunity for a streamlined cost-of-service showing also will allow operators to account for new services through upgrades of their systems. In addition, I support today's effort to distinguish legitimate "a la carte" marketing practices for programming services from those practices that could constitute evasions of the Commission's rate regulations. In this regard, I believe that the presumptions regarding "a la carte" practices will enable the Commission to identify legitimate package offerings that increase realistic consumer choices and provide for a reasonable number of programming services at favorable rates. Finally, the Commission has provided for a measure of rate relief for small operators, which will allow certain small operators to make external cost and "going forward"

Statement of Commissioner Andrew C. Barrett); Testimony of Commissioner Andrew C. Barrett, Federal Communications Commission, Before the U.S. House of Representatives, Subcommittee on Telecommunications and Finance, (September 28, 1993).

[2] See Keynote Address by Commissioner Andrew C. Barrett, Federal Communications Commission, Prentice Hall Law & Business Cable Conference; June 28, 1993. See also Order in MM Docket No. 92-266, FCC 93-372, released July 27, 1993, 58 FR 41042 (Concurring in Part and Dissenting in Part Statement of Commissioner Andrew C. Barrett); Testimony of Commissioner Andrew C. Barrett, Federal Communications Commission, Before the U.S. House of Representatives, Subcommittee on Telecommunications and Finance, (September 28, 1993); Order, MM Docket No. 92-266, released February 8, 1994 (Separate Statement of Commissioner Andrew C. Barrett).

adjustments to rates regardless of where the rates of these systems fall relative to the benchmark. Nonetheless, I remain concerned that some small operators may find that further relief is necessary in order to avoid particular hardship, and I emphasize that the provision for additional hardship relief to certain small operators, as well as the streamlined cost-of-service mechanism, will become important recourse for small operators in such dire situations.[3]

The revised rules also will initiate a cost study to verify cost differences among cable operators in comparison to the competitive differential. I believe that this study will provide important information to guide the Commission's analysis of the differences among competitive and noncompetitive operators, as well as the operating distinctions that may exist among small, medium and large operators. I also believe that this detailed cost information will enable the Commission to evaluate the validity of many policy assumptions that have guided our efforts in this proceeding, and therefore, will help to identify whether further adjustments are necessary to these refined rate regulations. As a result, I believe that it is appropriate to postpone rate actions as applied to certain systems, especially to small systems and those systems with rates below the new benchmark level, and to base future rate actions for those systems upon the differential, if any, identified by results of the cost study. I especially am interested in the cable industry's full participation in this cost study in order to resolve a notable void in this proceeding's record. As a consequence, I believe that these studies must be completed as soon as possible before the end of 1994 in order to promote the certainty that will enable all operators to develop future business plans.

Based upon my own analysis, I believe that the new competitive differential of 17% as compared to the September 1992 rate levels represents the highest point of what I consider to be an acceptable range for this policy determination. I have previously asked questions regarding the proper procedure for calculating the differential between competitive and noncompetitive rates, especially concerning the effect of the statistical treatment for low penetration and municipal systems on the differential.[4] I am aware that the Commission's revised data and statistical procedures provide analytical support for a 17% differential by focusing primarily on the differences between noncompetitive systems and overbuild systems, while retaining a measured consideration of the low penetration and municipal systems in the competitive sample. Nonetheless, I remain concerned that a more cautious approach for developing a competitive differential would reflect the limited confidence that results from a relatively small sample size and a lack of cost data. Furthermore, I consistently have emphasized the need to consider the effect of the cable rate regulations on industry investment.[5] The freeze on cable revenues and the implementation of the benchmark mechanism have had a negative impact on the cable industry's

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[3] The dire financial straits faced by many small operators are well documented in this proceeding, including a letter submitted by the U.S. Small Business Administration, January 27, 1994.

[4] See Rate Order and Further Notice of Proposed Rulemaking in MM Docket No. 92-266, FCC 93-177, released May 3, 1993, 58 Fed Reg 29736 (Separate Statement of Commissioner Andrew C. Barrett).

[5] See n. 2.

revenues and kept rates from rising. For example, a recent study states that these actions "have already precipitated more than an estimated $2 billion direct loss of revenues and cash flow," while also citing "the complete foreclosure of growth avenues for cable TV programmers."[6] Therefore, I am concerned about the potential effects of the 17% competitive differential relative to the September 1992 rate level. However, I also believe that the entire cable rate regulation package, including our cost-of-service and "going forward" options, incorporates important elements of flexibility that will allow operators to adjust to the 17% differential, where necessary. For example, all systems are permitted to adjust rates for external costs and "going forward" factors. Systems above the benchmark, which are required to reduce their rates by the full competitive differential, are permitted to make adjustments for inflation as accrued between September 1992 and September 1993.

Additionally, I believe that the benefits of the "going forward" mechanism for many operators will occur through the streamlined cost-of-service process, which will be subject to further comments and refinements. Given that this process will affect the incentives for operators to invest toward future system developments and the carriage of new programming services, I am concerned that this streamlined cost showing serve as an important bridge between the benchmark mechanism and the requirements for a full cost-of service showing. The streamlined cost-of-service process will play a critical role within the rate regulation framework, especially through provisions for an incentive-based plan for upgrades and the opportunities to demonstrate separate allocations for improvements to existing regulated services.

With respect to the cost-of-service proceeding, I support various aspects of the Order that grant flexibility to operators with unique cost-based circumstances that justify rates above the new permitted benchmark level. Furthermore, the cost-of-service process includes a rate-of-return factor of 11.25% that is reasonable as compared to other regulated industries, especially after tax considerations are included. I believe that necessary flexibility in the cost-of-service process also occurs through the cost allocation mechanism, the procedure for determining the portion of excess acquisition costs that operators may recover, as well as the provisions for treatment of Subchapter S corporations. As a result, I believe that the range of factors considered in the cost-of-service process, including the option for hardship showing, will begin to mitigate some of the consequences for cable operators who may endure the most significant changes as a result of the new 17% competitive differential.

Finally, I believe that this decision must be viewed in light of the overall package of elements that affect the rate calculations as well as the rate adjustments and cost showings that will be allowed. Therefore, I encourage the industry to await the release of all final orders before assessing the effects of these decisions on their particular markets. In the end, my goal is

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[6] See Study by Paul Kagan Associates, January 1994. The record in this proceeding underscores the difficulties created by cable rate regulation for many programmers, including certain programmers that have manifested subscriber increases, in part, by initially offering services at no cost. See Correspondence filed tin MM Docket No. 92-266 by Discovery Communications, February 1, 1994; E! Entertainment Television, February 14, 1994; and United Video, February 14, 1994.

to ensure that our decisions in this area are balanced and will permit continued investment to enhance services to the public. These rulemakings on cable rate regulation have involved extremely complex analysis, and I acknowledge the outstanding dedication shown by our Commission staff, my colleagues, and their respective staffs.